Health Research Strategy

Healthy People. A Healthy Province.

105-00302/

A Message *from the Minister of Health:*

I am pleased to present *A Health Research Strategy for Saskatchewan*, which outlines a collaborative plan to strengthen health research in the province.

This strategy was built out of the hard work of the Saskatchewan Health Research Foundation (SHRF), which provided critical advice regarding the development of the strategy. I thank them for providing their expertise and time not only on the development of this strategy, but now on its implementation and monitoring.

I must also thank the members of the health research community who took the time to share their views with SHRF during a comprehensive consultation on health research. The views and knowledge of the consultation participants were integral to this process.

This is a strategy with a clear vision: to ensure that we can generate and use the knowledge that is necessary to improve the health of our people. Saskatchewan's social and economic success is critically tied to the health and well-being of its citizens. Health research can help us to address the health status and health system challenges currently facing us, by ensuring that we are making informed decisions in all areas of the health system including treatment, prevention, and program and policy development.

A collective effort from the research community as a whole can ensure that health research in Saskatchewan is a vibrant and growing sector. Collaboration and partnerships between and amongst researchers, research funding providers and research users will be paramount to the success of this strategy and health research in general in Saskatchewan.

I invite all members of the health research community, in the months and years ahead, to use this strategy as a guide for their health research planning and activities.

John T. Nilson Q.C.
Minister of Health

Executive *Summary*

Glance at any newspaper or television newscast and you will likely find evidence of the tremendous growth in health research in Canada. Each year, hundreds of millions of dollars are invested in support of research that answers important questions about health issues affecting us all.

In Saskatchewan, researchers and research groups have attracted national recognition and funding for excellence in their respective fields. Their research comes in many forms, from laboratory research into the cause and treatment of disease to health policy research that examines the most effective ways of organizing and delivering health care services. Although the end products may look very different, their research shares a common characteristic – it provides the evidence and the tools that our citizens, our health care providers and our policy makers need to create a healthier population and a stronger health care system.

While there are areas of strength within our universities and research organizations, it is also true that our province can and should do much better. Saskatchewan does not capture its per capita share of national health research funding and, as a result, is losing out on opportunities to conduct more research and employ more researchers in the province.

Saskatchewan residents have a definite interest in ensuring a strong research presence within the province. Local investigators can address the special research needs of our population and of our health care system; they are essential in the delivery of quality health sciences education programs and apply their medical expertise in our health facilities; and they are important contributors to our local economies through direct employment and the commercial application of research findings.

Over the years, efforts to improve the competitiveness of our research community have resulted in the formation of research agencies specializing in areas such as population health research, health systems research, and Aboriginal health research. A new federal-provincial grant program was established to support projects that score well in peer-reviewed competitions, but do not attract traditional federal funding. And the provincial government has increased its direct funding for health research, and invested in facilities and research infrastructure. The province currently spends $13 million annually in direct support of health research, along with approximately $22 million in university operating funds that are used in support of health research.

There is widespread recognition that in order for Saskatchewan to be more successful, it must become more strategic and focused in areas where the province has a competitive advantage. Resources must be dedicated to establishing research activity and capacity in areas where the province has an opportunity to become a national or world leader. New approaches are required to ensure that as a small province we generate the greatest benefit from financial and human resources, while ensuring that health research is being used effectively to improve our health and our health system.

Until now, there has been no single, provincial strategy that establishes common directions for health research activity in the province. Following the release of the Action Plan for Saskatchewan Health Care in December 2001, the provincial government established the Saskatchewan

Health Research Foundation (SHRF) to oversee the province's competitive research grant programs and research agency funding. In February 2003, the Minister of Health asked the newly established foundation for its advice and assistance in developing a provincial health research strategy.

In developing its advice, SHRF conducted widespread consultations involving participants from the research and education communities, health delivery organizations, health charities, government, community groups and the private sector. This strategy embraces the research priorities identified through the consultations and in the SHRF advice. It incorporates the three-part framework recommended by SHRF: building health research expertise and activity in target areas; ensuring health knowledge translates into benefits for health, health care, education and the economy; and strengthening the overall health research base.

The strategy was developed not as a *government* health research strategy, but as a *provincial* strategy that offers direction to the broader research community. A collective effort on the part of all health research related organizations and individuals can have a significant impact on the future of health research in Saskatchewan. The collaboration and partnership of other health research organizations will be paramount to the success of this strategy and health research in general in Saskatchewan.

The strategy also reflects a strong leadership role for SHRF, which is uniquely situated to be a catalyst for many of the actions identified in this strategy. Saskatchewan Health and SHRF have approached the development of this strategy with the intention that its scope includes the broader health research community. Saskatchewan Health has developed the following strategic directions with this collective and collaborative approach in mind.

Establishing Research Priorities

As a small province, it is important for Saskatchewan to focus its research resources and energies in areas that are critical to the health and well-being of its population, and to take full advantage of current strengths and opportunities. The strategy identifies a series of research priorities that reflect the province's demographic and geographic characteristics, the health status and health challenges of Saskatchewan residents, and existing areas of strength and unique advantages in health research. Many of these areas were also identified during the consultation process as areas of strategic advantage:

- Specific population groups, including Aboriginal people and seniors;
- Rural and remote health care delivery;
- Health systems and policy research in areas including workforce planning, training and forecasting; quality management and improvement; primary and mental health care services; timely access to care; and innovative, cost-effective health delivery models.
- The determinants of health status, including early childhood health issues and chronic disease prevention (with an emphasis on diabetes, obesity and smoking);
- Public health, water safety and food safety; and
- Synchrotron-based health research.

All research organizations will be encouraged to focus research activities in these areas, and SHRF will be asked to review its provincially funded grant programs and research agency funding to ensure they are consistent with these priorities.

Knowledge Transfer – Applying What We Learn

For health research to have the greatest impact, it must be communicated to the public and other potential audiences in a way that is understandable and readily accessible. Knowledge transfer is a term that describes the process whereby research findings are disseminated to

and applied by the general public, health care providers, educators and researchers, health policy makers and commercial enterprises.

This strategy recognizes the importance of an effective two-way information exchange between those conducting and using health research. It encourages researchers and research organizations to build knowledge transfer into all health research projects, and specifically directs SHRF to develop a knowledge translation framework for the province.

Building Health Research Capacity

A strong contingent of student and established investigators. Modern facilities and equipment. Networks and partnerships that support collaboration among researchers. Direct financial support for research projects and broader funding to attract and keep research personnel. A supportive environment that extends across research organizations, government and the general public.

These are some of the elements of a strong research foundation that must exist for health research to thrive in our province. While there has been progress in all of these areas, there is more we can do. Universities, government, and SHRF must work together to identify new ways to attract and retain graduate, doctorate and post-doctorate trainees. A health research chairs program should be explored as a method of attracting senior researchers in priority areas. SHRF must explore further opportunities to assist researchers in their pursuit of competitive research funding from national sources.

As noted above, the provincial government has increased its direct funding for research and its support for university and research infrastructure. This additional funding will assist the implementation of this strategy and the government will look at increasing its investment in health research over the life of the strategy, as resources allow.

Implementing and Monitoring the Strategy

Expanding health research activity in our province and maximizing the benefits from that research are long-term undertakings that will require the commitment of many key players. The strategy provides broad direction pertaining to research priorities, knowledge transfer and capacity building. It also identifies key actions – some of which can be acted upon immediately and others that will be completed over a longer period.

SHRF will assume lead responsibility for implementing several of the key actions, and will serve as a catalyst to stimulate collaborative action involving other partners. For example, SHRF will organize a health research summit involving the providers, funders and users of health research. The summit will serve as an opportunity to exchange ideas and develop plans for advancing the directions and actions contained in the strategy. SHRF will evaluate the strategy using accepted performance measures and will report to the public and the government at five- and 10-year intervals.

Conclusion

There is widespread agreement about the need to expand the health research presence in Saskatchewan, and about the health and economic benefits of doing so. The consultations that have informed the development of this strategy also suggest there is considerable agreement about what it will take to achieve this goal.

The mere existence of a health research strategy will not generate more research activity; but it can serve as a common reference point for health research partners to work in concert so they can assume a greater role in improving the health and well-being of Saskatchewan people.

Chapter 1 *Why we need a provincial health research strategy*

Benefits of Health Research

Health Research is an important public investment because it:

- *Produces health discoveries that lead to better health products and health-care services;*
- *Provides evidence for sound health care decisions and policy-making;*
- *Helps address health issues, leading to a healthier, more productive population;*
- *Helps address health system issues, improving quality, accessibility and sustainability;*
- *Provides a source of expertise and leadership for adapting and applying new approaches and interventions;*
- *Sustains health science and related education for our next generation of health service providers and health researchers;*
- *Builds strong programs that attract excellent health researchers, faculty and students;*
- *Provides opportunities for highly skilled jobs in the health sector; and*
- *Offers the potential for innovative business opportunities and provincial economic growth.*

(SHRF, Shaping a Provincial Health Research Strategy for Saskatchewan: Advice for the Minister of Health From the Saskatchewan Health Research Foundation)

Saskatchewan's social and economic success is critically tied to the health and well being of its citizens. Health research provides the information and the tools by which we can begin to address Saskatchewan's health status and health system challenges. Many of these challenges were identified in *The Action Plan for Saskatchewan Health Care*. The Action Plan, released in December, 2001, identified four main areas of focus:

- supporting health promotion and disease prevention;
- improving access to health services;
- retaining, recruiting and training health providers; and
- placing a greater emphasis on quality, efficiency and accountability.

The need for solid, useable health research cuts across all of these areas. It is important, then, to ensure that we have a plan in Saskatchewan not only to increase our health research capacity, but to ensure that we can understand and use health research effectively.

As a small province, Saskatchewan is continually challenged to do more with limited resources. This is particularly true in health research. As demands for all types of health research increase, Saskatchewan must find ways to focus its health research energies, build capacity and support for research, and ensure that current and new research findings are translated into benefits for Saskatchewan people.

In order to take full advantage of all the benefits of health research, we must collectively be moving in the same direction with similar end results in mind. As mentioned, there are three broad strategic directions proposed by this strategy: establishing research priorities, increasing the transfer of knowledge both to and from researchers and their audiences to ensure the greatest benefit, and strengthening health research capacity.

Each of these strategic directions are interdependent. In order to ensure that the best information is provided to the people who most need it (knowledge transfer), we need to ensure that we are generating the best research for addressing our needs, (research priorities). In order to do the best research for our needs, we must ensure that we have the capacity (i.e. the researchers and resources) to do that research. Strengthening in one strategic area will, to varying levels, strengthen other areas.

The strategic directions have been developed with this interdependency in mind.

The Development of the Strategy

The Saskatchewan Government released its *Report on Strategic Investment in Research and Development by the Government of Saskatchewan* in October, 2001. The Report provided overarching research and development direction to the Government. However, with the release of the Action Plan, and the increasing focus globally on evidence-based decision-making in health care, the need for a more in-depth health research strategy became clear.

In February 2003, the Minister of Health asked the newly-created Saskatchewan Health Research Foundation (SHRF) for advice and assistance in the development of a provincial health research strategy. Specifically, the Minister asked SHRF to offer advice about:

- identifying strategic advantages for Saskatchewan-based health research;
- articulating a balance in the different forms of health research;
- establishing priorities for health research; and
- ensuring health research directly contributes to the improvement of health services, health policy and the health status of Saskatchewan people.

In response to the Minister's request, SHRF organized a broad consultation related to health research in Saskatchewan. The consultation included a discussion paper and web-based survey to gather individual views and small-group sessions to gather information from many sectors including universities, health system, community-based organizations, charitable agencies, civic leadership, and business.

The final product of this broad consultation was the creation of an advice document that SHRF provided to the Minister of Health in January 2004. The advice document outlined three strategic goals for a health research strategy, as well as other recommendations and actions that SHRF believed to be critical to the development of a provincial health research strategy. The three strategic goals recommended by SHRF are:

1) Building health research expertise and activity in certain target areas, determined by health needs, research strengths, and unique opportunities;
2) Ensuring that health research knowledge translates into benefits for health, health-care, education and the economy; and
3) Strengthening the overall health research base that provides capacity, both people and infrastructure, to address current and future needs.

SHRF recommended that the province focus its research energies on particular areas of need and strength for Saskatchewan:

- Health needs of specific population groups, particularly Aboriginal people and seniors;
- Health systems and policy research focusing on optimal service delivery and staffing models, rural and remote health care delivery, and mental health care;
- Health determinants with an emphasis on particular conditions such as diabetes, obesity and smoking;
- Unique health research opportunities including the Synchrotron and food and water safety;
- Knowledge transfer; and
- Strengthening the overall health research base including human resources, funding, infrastructure needs, and profile.

After considering the advice from the Saskatchewan Health Research Foundation, and key health system needs, we have identified three broad areas for focus. We believe that the following strategic directions and actions reflect both the priorities identified through the consultation and subsequent advice from SHRF and the public interests related to the health system in Saskatchewan. These directions will drive our health research agenda in the province.

Health Research In Saskatchewan: Charting a Path

Consultation summary prepared for the Saskatchewan Health Research Foundation

HIGHLIGHTS

- *Health research is highly valued and seen as a key part of a strategy to address health issues in the province of Saskatchewan and beyond.*
- *Stakeholders feel that SHRF should set a focused strategic direction and move definitively to achieve identified goals.*
- *The health status of Aboriginal peoples in the province is a critical component that needs to be addressed. This is important not only because of health issues, but also because the contribution of Aboriginal peoples is key to the economic future of the province.*
- *Priorities for health related research include: the health of Aboriginal peoples, health systems and policy, specific health focuses (e.g. lifestyles, diabetes, mental health, injuries), and food safety and environmental health.*
- *Mechanisms identified as essential for supporting progress in health research include:*
  - *a strong, active foundation of research activity,*
  - *people, especially increased strength in the established investigator category who can then act as magnets for young investigators,*
  - *enhanced connectivity between those involved in the research enterprise,*
  - *enhanced physical plant and administrative support, and*
  - *public, organizational and policy support for research.*
- *Many organizations must make specific contributions to research to see maximum effect: SK Health, universities, health regions, health charities, public interest groups and organizations specifically structured to support the research enterprise (e.g. SHRF, Health Quality Council).*
- ***Focused attention on all aspects along the spectrum of knowledge utilization - knowledge generation, knowledge transfer and knowledge uptake - is required to achieve maximum return on research investments.***

(Birdsell, J., Health Research in Saskatchewan: Charting a Path. Prepared for the Saskatchewan Health Research Foundation)

Chapter 2 *Research Priorities for Saskatchewan*

For Saskatchewan to become more successful in health research, the province must become more strategic and focused in areas where the province has a competitive advantage. Resources must be dedicated to establishing research activity and capacity in areas where the province has an opportunity to become a national or world leader.

This strategy identifies a series of priority areas based on the health needs of Saskatchewan people, existing strengths in the research community, and opportunities that exist for our researchers to excel.

One of the strongest and clearest messages arising from the Saskatchewan Health Research Foundation's consultations toward this strategy was that there needs to be clear focus on a limited number of priority areas based on strengths, needs and opportunities.

The province is too small and our health research resources don't allow us to be "all things to all people," was a common refrain.

It is a message that also came loud and clear from the Report of the Commission on Medicare by Ken Fyke. The report noted that Saskatchewan researchers tend to be spread thinly over a large number of areas, placing the province at a disadvantage in research grant competitions and in the recruitment and retention of personnel. The report said the province should concentrate on developing a critical mass of experts by targeting resources in areas where Saskatchewan has a comparative advantage. It listed Aboriginal and rural health research as areas where the province has an opportunity to become a world leader.

Building health research expertise in areas of particular interest to Saskatchewan will be beneficial to our universities and researchers, as they become more competitive and develop into leaders in their fields. It will also be beneficial to the residents of the province, as this expertise is applied to important health and health system issues facing the province.

The research priorities identified in this chapter are based on a series of factors, including the province's demographic makeup, the health status of its people and related challenges, existing areas of strength within the research community, and emerging opportunities presented by federal funding programs and the existence of the Canadian Light Source synchrotron.

During the consultations, respondents were asked how research funding should be balanced among the four pillars of research, as defined by the Canadian Institutes of Health Research:

> *"A strategic research program can help solve problems unique to or prominent in the province. For example, Aboriginal health, rural health and the social determinants of health have obvious and profound relevance to Saskatchewan. While there are pockets of excellence in these areas, achieving world-class levels of activity and accomplishment could result in advances that both improve health and reduce the demands for ineffective services."*
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> *- Caring for Medicare Sustaining a Quality System – Saskatchewan Commission on Medicare. April 2001*

- basic biomedical research (laboratory science);
- clinical research (patient oriented);
- health services and policy research (health delivery system); and
- population health research (social, cultural and environmental determinants of health).

At least one other Canadian province, Nova Scotia, has a funding formula that assigns a set percentage of the research budget to the different research pillars. However, participants in the SHRF consultations were reluctant to set funding levels for each of the four research pillars, preferring instead to develop priority issues or areas that could be investigated by researchers in any of the four pillars.

University and other research organizations will be encouraged to focus their research activities in the areas identified through this strategy. It is important to recognize that the University of Saskatchewan and the University of Regina have identified consistent health research priorities in their planning documents. This is particularly true for the College of Medicine at the University of Saskatchewan. The College has identified, in its integrated plan, 11 priority initiatives including: Aboriginal health, primary health care, rural health care, clinical research, rehabilitation sciences, urban underserved, and public health.

SHRF will be asked to review its competitive funding programs and research agency funding to ensure that they are consistent with the priorities outlined in the strategy. In addition, the Departments of Health and Learning will work with SHRF and the universities to develop criteria that ensure health research supported by the Innovation and Science Fund is consistent with these priorities.

Health Research Priorities for Saskatchewan

Aboriginal Health

Research into Aboriginal health issues is an area of great need and one that is emerging as an area of strength in our research community. Saskatchewan has a higher proportion of Aboriginal people than most parts of Canada and the province's Aboriginal population is growing faster than the rest of the population. There are a number of particular challenges related to Aboriginal health status and the delivery of health services to Aboriginal people living in remote areas of the province.

The health of Aboriginal people, as measured by life expectancy and many other health indicators, is much worse than the rest of Canadians as a whole. A recent report by the Canadian Institute for Health Information found Aboriginal people have a higher burden of chronic and infectious disease, obesity and injuries. Research examining the underlying determinants of these health challenges, methods of treatment, and how best to deliver services to Aboriginal people will be essential in overcoming these inequities.

Aboriginal participants in SHRF consultation sessions expressed the need for more research, done appropriately and in partnership with the Aboriginal community. Certain Aboriginal approaches, such as community

> *"In the past, research has not always helped aboriginal communities because it failed to address urgent health concerns and because there was little or no aboriginal ownership of research projects. …Aboriginal people must be full partners in research, not merely informants and respondents."*
>
> *(CIHR – Institute of Aboriginal People's Health, Five Year Strategic Plan – 2002-2007)*

support and holistic traditional healing, can also serve as positive models for all people.

Saskatchewan is well-positioned to lead in the field of Aboriginal health research through the universities, health regions, Aboriginal organizations and particularly the new First Nations University of Canada and the Indigenous People's Health Research Centre. Federal funding is available through the Institute of Aboriginal Peoples' Health at the Canadian Institutes of Health Research (CIHR), presenting opportunities for research and greater knowledge about these important issues.

Seniors

Elderly people tend to experience more health challenges and require more health services than younger people. Since this segment of the population is growing quite rapidly in Saskatchewan, there are questions about the impact for our health system and about providing the appropriate services in a timely way to seniors.

As of 2002, nearly 15 per cent of the provincial population was 65 years or older, and that figure is expected to rise to 18 per cent by 2020. There is a higher percentage of seniors living in rural areas, so it is important to understand the most effective ways to meet their health needs and organize health care delivery.

Some of the existing research strengths in this area include the Centre on Aging at the University of Regina, expertise at the University of Saskatchewan in palliative care and dementia care, and keen interest within regional health authorities in addressing the needs of elderly.

Health Systems and Policy Research

Health systems and policy research offers answers to some of the burning questions facing our health care delivery system: How can we make our health care system more effective and affordable? How many doctors, nurses, and other health care providers will we need to meet future health needs? How can we reduce the number of adverse events in the health care system? What programs and interventions will improve access to care for people with mental health problems and addictions?

As governments around the world wrestle with the rising costs of health care, it is imperative that our health care systems are organized as effectively as possible and that health programs and expenditures are meeting their full potential. Health systems research provides the evidence that is needed to make informed decisions and then measure the results to determine success or failure.

Saskatchewan has a national reputation in health systems and policy research, developed over the years by the Health Services Utilization and Research Commission (HSURC), along with researchers working in the universities and health authorities. As the first organization of its kind in Canada, the Health Quality Council has reinforced the province's leading role in health systems research.

The Determinants of Health Status

It is a well known fact that individual health status is greatly influenced by a person's income, education, diet, housing and social supports. As we gain a better understanding of these underlying determinants of health, we can make better decisions about what programs and supports will have the greatest impact upon the health of Saskatchewan people.

Problems that arise before birth, during infancy and in early childhood can result in poorer health status throughout a person's life. Therefore, it is important to understand the genetic, social and economic issues that

affect childhood development, and to measure the effectiveness of programs designed to support families and communities.

The prevalence of chronic diseases - such as diabetes, obesity, high blood pressure, and smoking related illness - is another significant health problem that invites research into the underlying causes and prevention measures. The Saskatchewan Population Health and Evaluation Research Unit has become a leader in population health and health determinants research, engaging researchers in various disciplines at the University of Regina and University of Saskatchewan .

Public Health, Water Safety, and Food Safety

SARS, West Nile Virus, Mad Cow Disease and avian flu have raised the profile of public health issues and opened new doors for public health research in Canada. Earlier this year, the federal government announced the creation of a new public health agency with six "collaborating centres" that will support public health research.

The University of Saskatchewan's Veterinary and Infectious Disease Organization (VIDO) has gained prominence through its research aimed at protecting humans and animals from emerging diseases. VIDO has announced a new international vaccine centre. The University of Saskatchewan is also strengthening its public health research capacity with the development of a master's degree program in public health.

Food and water safety are of fundamental concern to Canadians. The CIHR has recently identified this as a new priority research area. Saskatchewan has the potential to be an international leader in the area of food and water safety, given its existing strengths in biotechnology and immunology, and the co-existence of the plant sciences, animal health sciences and human health sciences programs.

Synchrotron-Based Health Research

As one of only three such facilities in the world, the Canadian Light Source synchrotron presents an enormous opportunity for conducting health research and attracting leading health researchers to our province. The synchrotron is a facility the size of a football field that casts a brilliant light source, a million times more intense than medical x-rays, allowing matter to be "seen" at the atomic scale. The Canadian Foundation for Innovation has approved funding for a medical beam line that will have many biomedical and other health related applications. It will be important to identify all of the potential research opportunities and how they might be practically applied for the benefit of our residents.

Strategic Direction:

Address emerging health and health system challenges through a pragmatic and focused approach to health research in Saskatchewan. Health research resources should be focused on areas of need while capitalizing on areas of strength. This will include a research focus on the needs of specific population groups, key health determinants, and unique Saskatchewan needs and opportunities.

Actions:

That the Saskatchewan health research community (including SHRF, the universities, and other research organizations) move, over time, to focus their health research activities in these key areas: Special population groups, including Aboriginal health and seniors; rural and remote health care delivery; health systems and policy research; the determinants of health status; public health, water safety and food safety; and synchrotron-based health research.

That SHRF align its funding for competitive programs and research agencies with the priorities outlined in this strategy. In addition to reflecting the priorities, SHRF will ensure that its funding program criteria encourage a strong partnership approach and reflect the appropriate balance of health research activities in the biomedical, clinical, health service delivery and population health areas, based on Saskatchewan's current needs.

That the Departments of Health and Learning, in consultation with SHRF, consider potential criteria to be applied to the Innovation and Science Fund, which will help to ensure that health research supported by the Fund is consistent with the health research priorities of the province.

Health Needs of Specific Population Groups

That SHRF work in partnership with the Aboriginal community, the Indigenous Peoples' Health Research Centre, the three universities and other agencies as appropriate to help ensure that Aboriginal health research in Saskatchewan is done in a collaborative, inclusive and culturally sensitive manner. As part of this initiative, SHRF and its collaborating partners may want to consider discussions regarding:

- *defining specific health research priorities;*
- *developing culturally appropriate strategies for undertaking research that addresses Aboriginal peoples' health needs;*
- *exploring effective, culturally sensitive knowledge transfer mechanisms for First Nations and Metis populations (in conjunction with the provincial knowledge transfer framework development noted in Chapter 3);*
- *developing approaches that minimize duplication of resources and efforts in the field of Aboriginal health research.*

SHRF will consider the information and feedback from its discussions with the Aboriginal community, Indigenous Peoples' Health Research Centre and other collaborating partners as it develops its strategic directions and program funding priorities.

In order to meet the health needs of our aging and elderly population in both rural and urban settings, SHRF will collaborate with the Department of Health, the seniors' community, the universities and other agencies as appropriate, to identify health research priorities for this growing population.

Health Systems and Policy Research

That key stakeholders including SHRF, the Department of Health, Health Quality Council, Academic Health Sciences Network, regional health authorities, and the universities, identify research needs related to workforce planning, training and forecasting; quality management and improvement; primary and mental health care services; timely access to care; and innovative, cost-effective health delivery models.

That key stakeholders including SHRF, the Department of Health, Health Quality Council, regional health authorities and other appropriate agencies, collaborate to identify research needs related to rural and remote health service delivery.

SHRF, through consultation with the universities and other health research organizations, will identify and facilitate appropriate mechanisms by which current research, relevant to health system management and health program policy, can be synthesized and disseminated.

Health Determinants and Public Health

SHRF will encourage and facilitate health research related to the determinants of health status, including early childhood development and the prevention of chronic and lifestyle related disease (with an emphasis on diabetes, obesity and smoking).

SHRF will explore the research needs/priorities related to public health in Saskatchewan and identify new opportunities related to the new Public Health Agency of Canada.

That a collective and coordinated effort in the area of safe drinking water be organized to determine research priorities in the water safety field. This effort should build on existing processes and activities including work undertaken by the Working Group on the Provincial Long-Term Safe Drinking Water Strategy, the Institute of Agricultural, Rural and Environmental Health, and other agencies as appropriate.

Unique Health Research Opportunities

That the Saskatchewan health research community (including SHRF, the universities, and others as appropriate) explore synchrotron-based health research opportunities and priorities, as well as related health system applications and impacts related to the Synchrotron, to ensure that Saskatchewan makes the best of this unique opportunity in our province.

Chapter 3 *Knowledge Transfer - Applying What We Learn*

How do we ensure that the knowledge that we gain from health research is used to the fullest? What are the best mechanisms for sharing research results with the general public, health care providers, health policy makers, commercial enterprises, and other researchers who would benefit from this work? And how can we ensure researchers are aware of the research needs of these end users, so they can respond to emerging issues and priorities?

There is a growing effort across Canada to answer these challenging questions, so that the knowledge acquired through research generates the greatest benefit to health, the health care system and the economy.

This strategy recognizes the importance of an effective two-way information exchange between those conducting and those receiving health research. It encourages research organizations to build knowledge transfer into all health research projects and specifically directs the Saskatchewan Health Research Foundation to develop a knowledge translation framework for the province.

It is impossible to make evidence-based decisions without knowing about or having access to the evidence. Knowledge transfer is about translating the results from any research project into usable, relevant information. It is about providing those results to the public and other potential users in a form that is understandable and applicable to their lives or their work. And it is about policy makers informing health researchers about the important questions that need to be answered, so their findings are answering a need for relevant evidence-based information.

The end goals of knowledge translation can vary depending on the nature of the research. For example, in health services research, the result may be a recommendation on how to improve the quality or effectiveness of a health program or service; in population health research, the end goal is often social policy change; in clinical research, it may be deciding whether one treatment works better than another; in biomedical science it may involve the development of a new medicine or device.

Effective knowledge transfer cannot occur without partnerships. In Saskatchewan, this means partnerships involving research organizations, universities, government, regional health authorities, community-based organizations, and funders. It also means being inclusive at each stage of the research process – from designing, to conducting, to interpreting health research.

The Canadian Institutes of Health Research defines knowledge transfer as "the exchange, synthesis and ethically sound application of researcher findings within a complex system of relationships among researchers and knowledge users".

Existing Models

There are many successful examples of knowledge translation already in place in Saskatchewan. The Health Quality Council and its predecessor, the Health Services Utilization and Research Commission, have made the dissemination of their health systems research to the public and health stakeholders a top priority. Through its

free online service called Health Clips, the Quality Council also plays an important role in distributing national and international health systems research from medical journals and media sources. The Quality Council is also arranging for public access to the Cochrane Library Collection, a database of medical information and research that is currently only available by subscription.

The Institute for Agricultural, Rural and Environmental Health has developed a unique network for distributing research on rural occupational health and safety issues to farm families across the province. The Agricultural Health and Safety Network was formed in 1988 to translate the Centre for Agriculture Medicine's research results into practical, useful information for farmers. Today, over 140 rural municipalities participate in the network and over 23,000 receive important information about how to reduce farm related injury and illnesses.

On a national level, several organizations involved in funding and commissioning health services and policy research have joined forces in a national consultation process to determine what health system managers and policy makers perceive to be their immediate and longer-term research priorities. The first Listening for Direction report was published in 2001 with a second round of consultations recently completed, and preliminary results from the second round of consultations are available on the Canadian Health Services Research Foundation website.

There are many other examples of innovative partnerships in Saskatchewan and across Canada that can serve as a model for future improvements in knowledge transfer and application.

Developing a Knowledge Transfer Framework

This strategy encourages all health researchers and research organizations to build knowledge transfer into their projects. It also directs the Saskatchewan Health Research Foundation to work with research stakeholders to explore new mechanisms that will assist researchers and the users of health research in disseminating and applying the information generated here in Saskatchewan and also by researchers across Canada and around the world. The knowledge transfer framework will give consideration to the specific issues associated with research involving specific population groups or communities.

Strategic Directions:

Build the capacity of government, regional health authorities, other health-related organizations and health professionals to incorporate available and new health research into improved treatment and prevention strategies, service delivery, and health policy development.

Encourage the health research community at large to build a knowledge transfer component into all health research projects.

Develop culturally sensitive mechanisms for knowledge transfer to/from Aboriginal communities.

Build collaborative mechanisms through which policy and research organizations and individuals have ongoing and effective dialogues to ensure that health research needs in the province are identified and met.

Identify and encourage commercial applications for health research where appropriate.

Actions:

That all health research professionals and organizations (SHRF, universities, and other research organizations), health provider organizations, and other health research stakeholders commit to enhancing knowledge transfer in Saskatchewan by:

- *providing or accessing training and education regarding the benefits, necessities and methods of sharing and using health research knowledge;*
- *making health research findings accessible and available to other researchers, health professionals, and the broader public community;*
- *ensuring research projects involve the public and communities, as appropriate, in designing, carrying out, and interpreting health research;*
- *identify and encourage commercial applications for health research where appropriate.*

SHRF, in collaboration with the universities, Health Quality Council, and other key health research organizations will develop a provincial framework for building knowledge translation capacity in the province. The framework will include short and long term actions designed to ensure that we utilize research results in order to improve our health and our health system. As part of the framework, SHRF will consider:

- *the needs and responsibilities of health-related organizations related to knowledge transfer;*
- *the needs and responsibilities of the provincial government and regional health authorities in knowledge transfer;*
- *the roles of various research agencies (including SHRF and the universities) in knowledge transfer;*
- *the structures by which stronger relationships can be developed among researchers, research funders, research users and the public to identify and address research needs and ensure the application of research discoveries; and*
- *relevant mechanisms for knowledge transfer to specific communities.*

Chapter 4 Strengthening Health Research Capacity

Earlier chapters have discussed the need to focus on strategic priorities, and methods of applying research findings to ensure the greatest benefit to Saskatchewan residents. Success in these areas calls for a supportive research environment that provides the human, physical and financial resources that researchers need to meet these objectives.

Saskatchewan has not achieved its per capita share of national research funding, creating a need to train and attract new researchers and assist all investigators in achieving greater success. A health research chairs program should be explored as one method of attracting accomplished researchers in priority areas.

Just as training, keeping and attracting dedicated individuals is a top priority in the health care system, so it is in the world of health research. Without question, it is in our best interest to attract and train the next generation of health researchers by ensuring that there are rewarding opportunities for them in our province.

Related to this are the many factors that contribute to the successful retention and recruitment of researchers, ranging from opportunities for employment and advancement, to the ability to work with other accomplished researchers, to the quality and reputation of the research organization.

The Saskatchewan Health Research Foundation (SHRF) provides grant funding to new researchers to help them become established and further their research pursuits. A national research program exists to support scholars in health research and SHRF will identify potential funding partners to support a health research chairs program. The program should complement the national health research chairs program and SHRF's existing grant funding programs.

Strengthening capacity also includes ensuring that health researchers have adequate and appropriate space and equipment to do their work. Research organizations noted that research equipment can be a pre-condition for federal research funding. This is a continuing challenge for health researchers, and one that requires an ongoing commitment. A good example of Saskatchewan's current commitment to infrastructure is the plan for a new health sciences complex at the University of Saskatchewan, a new laboratory at the University of Regina, and a new Centre for Kinesiology, Health and Sports, also at the University of Regina. These facilities will expand available space to plan and implement research projects, and encourage collaboration among researchers from different disciplines.

Building research capacity is not limited to universities and specific research organizations. Regional health authorities can and do play an important role in the field of health research both as research generators and research users. They bring an important perspective to research, as

> *"Round-table participants used the term "bubbling foundation" to describe the need for a strong, growing and developing base, or foundation, of activity and resources that enables both targeted activity and progress across the health research spectrum."*
>
> *– SHRF: Shaping a Provincial Health Research Strategy for Saskatchewan , January 2004*

the provider of many front-line health care services. Their role in the health research community needs further consideration and clarification. There are also pressures faced by regional health authorities as the generators and providers of health research data. The Department of Health, regional health authorities, SHRF, and others as appropriate must work together to ensure that regional health authorities can continue to support and generate health research, without undue pressure on their limited resources.

Research Partnerships

The formation of research partnerships and research teams is one of the most effective ways of increasing research productivity and competitiveness. Over the past decade, there has been tremendous growth in research partnerships that bring together researchers with common interests through informal or formal affiliations. Here are just a few examples of research partnerships and programs to encourage partnership:

- The Indigenous Peoples' Health Research Centre is a partnership of the First Nations University of Canada, the University of Saskatchewan, and the University of Regina, that promotes research into Aboriginal health and builds research capacity in the academic and Aboriginal communities.
- In the Fall 2003, the Saskatchewan Health Research Foundation launched a new fund (Research Group Facilitation Grant) to encourage researchers from a variety of disciplines to form research groups. The first awards supported groups addressing treatments for diseases such as diabetes, cancer, heart disease, immune disorders, infectious disease, epilepsy and other brain disorders. SHRF funds for this grant program are matched by the researchers' home institution.
- The Canada Northwest Fetal Alcohol Spectrum Disorder Partnership, comprised of the four western provinces and three northern territories, is in the process of developing a research network that will help build FASD research capacity, develop and support FASD programs and initiatives, and encourage knowledge translation activities.

Research partnerships can include researchers with common interests, but also health delivery and community organizations with common objectives. For example, partnerships with regional health authorities can bring additional expertise and a front-line delivery perspective to the planning and execution of health research.

This strategy encourages all researchers and research organizations to pursue internal and external partnerships, and specifically directs SHRF to employ its grant funding criteria to support partnerships.

Provincial Research Funding

Saskatchewan Health provides its health research funding directly to the Saskatchewan Health Research Foundation (SHRF), which is responsible for organizing, managing, and allocating much of the direct provincial health research funding in Saskatchewan. About half of SHRF's budget goes to targeted research centres, while the other half goes to competitive programs awarded through peer-review. These competitive grant programs include research establishment funds for new faculty, career development support through research fellowships, and short-term developmental initiatives aimed at achieving greater success in national funding competitions. Saskatchewan Health also provides funding for the Health Quality Council, which focuses its research on health service delivery and quality improvement issues.

Saskatchewan Learning provides funding for health research primarily through its Innovation and Science Fund, which provides matching dollars for research projects approved by federal government research granting agencies (e.g. Canadian Foundation for Innovation).

Saskatchewan Learning provides operating grants to the universities, with approximately 10 per cent of this total dedicated to funding the human resources and the infrastructure to do health research.

The direct funding provided by the provincial government for health research is $12.93 million dollars. However, it is important to note that other provincial funding is provided to the universities, regional health authorities and the Saskatchewan Cancer Agency that supports health research through funding for human resources and other infrastructure (e.g. faculty, space, etc.). The tables below provide a breakdown of health research funding:

Research Funding Recipient	Amount
Saskatchewan Health Research Foundation (funding from Saskatchewan Health)	$5.93 million
Health Quality Council (funding from Saskatchewan Health)	$5 million
Innovation and Science Fund – health research (funding from Saskatchewan Learning)	$2 million (approximate annual amount)
Total	**$12.93 million**

Operating Funds provided that support health research	Amount
University operating funds for health research – faculty and infrastructure (funding from Saskatchewan Learning)	$22 million (estimate)
Regional Health Authorities and the Saskatchewan Cancer Agency	In kind human resources, space, etc.

Provinces across Canada struggle to meet expectations surrounding health research funding. Recommendations exist which indicate that health research funding should be at least one per cent of total health budgets. In an era of competing priorities and sustainability challenges for health systems generally, it is difficult for provincial governments to ensure this level of funding support for health research. Saskatchewan is no exception. With competing demands for health dollars, allocating new dollars to health research is a continuing challenge.

Differing organizational and funding structures make it difficult to make direct comparisons of research funding across provinces. Provincial research funding information provided to Saskatchewan Health, however, suggests that while the larger provinces make a greater funding contribution to health research, currently Saskatchewan's funding levels are consistent – and in many cases greater – than the mid-sized and smaller provinces on a per capita and total funding basis.

With the release of the *Action Plan for Saskatchewan Health Care*, Saskatchewan increased its funding for health research by $2 million. In September 2003, the province made a significant commitment to research infrastructure, with the announcement of a new Academic Health Sciences Building at the University

of Saskatchewan. The government recognizes the importance of provincial funding in building our research capacity and will consider opportunities for increased funding through the regular budget development process. While funding is important to building a solid research foundation, it should be noted that Manitoba and Nova Scotia have achieved a larger per capita share of national research funding, while providing comparable or lesser amounts of provincial research funding in comparison with Saskatchewan.

National Research Funding

An important challenge facing the Saskatchewan research community is achieving a "fair" share of the national health research funding available from national agencies such as the Canadian Institute of Health Research, Canadian Foundation for Innovation, and the Canadian Health Services Research Foundation.

The Canadian Institutes of Health Research (CIHR) is Canada's major funder of health research, with a current annual budget of over $600 million and targeted growth to $1 billion annually. It is the largest single funder of health research in Canada and in Saskatchewan.

Historically, the proportion of CIHR funds flowing to Saskatchewan has been low relative to other provinces. For example, in 2003-04, the province had 3.1 per cent of the Canadian population, but received 1.4 per cent of CIHR funding. The success rate in the previous three years ranged from 1.0 per cent to 1.3 per cent of CIHR funds in peer-reviewed competitions. It is important to note that while Saskatchewan performs below the national average for basic biomedical and clinical research, it earns more than 3.1 per cent of the funds allocated by CIHR for population health and health systems and policy research.

It is important that we do our best to ensure that Saskatchewan researchers are able to leverage more national research funding. Steps have been taken to remedy this problem, including the appointment of a University Coordinator of Health Research, whose mandate is to increase the number and quality of Saskatchewan applications for CIHR funding. SHRF provides $100,000 annually and the University of Saskatchewan provides $50,000 in support of this office. A mid-term review of the office determined that it has been a success, as measured by increased CIHR grants to Saskatchewan.

The Saskatchewan-CIHR Regional Partnership Program was created in 1999 to make up for an imbalance in national research funding and to help retain and attract, health researchers in our province. The program has helped to recruit faculty and students to our universities and has had an overall stabilizing effect on the research environment in Saskatchewan. The current partnership will expire at the end of the 2005-06 fiscal year, and the province is fully committed to continuing this program into the future.

Our overall performance in national funding competitions represents a missed opportunity for the province. Improving the competitiveness of our researchers is an underlying objective in all of the strategic directions and key actions in this strategy.

Accountability

Expectations regarding accountability have also grown in the last few years. We need to be accountable not only to those who provide funding for health research, but also to the public, which expects and demands to know if we are using our health research funds effectively. By reporting publicly on the outcomes and benefits of their work,

health researchers can build confidence that research dollars are being used effectively, and build greater public understanding about the importance of health research to their lives.

It is important to note that increased accountability should not limit the ability (and necessity) of researchers to take intellectual risks. The very nature of research is to seek knowledge without the ability to determine end results until the research is complete. Allowing researchers this freedom is integral in the pursuit of knowledge.

Increasing the Profile of Health Research

The strategy also identifies the need to increase the profile of health research activity in the province. Reporting on research achievements and recognizing government and third-party funding is an important way of informing the public about health research activity and investments. Demonstrating the tangible benefits of local research will help not only to build public support for health research but also to attract and retain health researchers and educators by promoting Saskatchewan as a "research friendly" province.

Strategic Direction:

Develop a stronger overall health research base in Saskatchewan by:

- **Increasing the number of active health researchers and research activities;**
- **Encouraging strategic partnerships in health research including partnerships among researchers, and partnerships between researchers and the public, private corporations and other provincial and national organizations;**
- **Ensuring the stability of provincial health research by increasing funding as resources allow;**
- **Enhancing Saskatchewan's ability to successfully compete for national health research funding;**
- **Increasing the pool of available health research funding by identifying and accessing other sources of potential funding provincially and nationally; and**
- **Ensuring that all health research funding is appropriately used, transparent, and achieves the stated goals of the research project.**

Actions:

Human Resources in all Health Research Areas

That a partnership of key stakeholders including SHRF, the Department of Health, the Department of Learning, and the Universities, assess the issues related to ensuring an appropriate/adequate supply of health research graduate, doctorate and post-doctorate trainees. The assessment should include:

- *consideration of roles and responsibilities of the provincial government and the universities related to this issue;*
- *analysis of existing vehicles and funding to help build the pool of graduate students;*
- *consideration of other potential options for attracting and retaining graduate, doctorate, and post-doctorate trainees in Saskatchewan*
- *ensuring that activities in this area are aligned with the strategic priorities of the health research strategy.*

SHRF will continue to encourage researchers to partner with other researchers or research groups (as appropriate) to enhance their work.

SHRF will develop a proposal and seek out funding partners, including government, community-based organizations, crowns and other corporations, to establish a "Health Research Chairs" program in Saskatchewan that would help support researchers working in priority research areas (as identified by the strategy) if these needs are not being met by other mechanisms (e.g. Canada Research Chairs Program).

National and Partner Funding

Regional health authorities will, as appropriate, identify and access opportunities to partner with universities, the Health Quality Council and other provincial and national organizations in order to conduct health system improvement and health status research. This examination should consider current barriers to regional health authority participation in health research and options for addressing them.

SHRF, contingent upon periodic evaluations, will continue to support the Saskatchewan/Canadian Institutes of Health Research – Regional Partnership Program as a mechanism to build provincial capacity to access federal research funding that is within the parameters of the provincial health research strategy (i.e. priorities).

SHRF will continue to identify partnerships, alliances, and other opportunities for increasing Saskatchewan's share of national health research funding available through the CIHR and other national and regional initiatives.

Infrastructure Needs

The Department of Health, the Department of Learning, the universities, and other agencies as appropriate, will continue to explore opportunities to improve the supportive infrastructure (facilities, equipment and other resources) that contributes to health research activities (e.g. continue to support the development of the health sciences building at the University of Saskatchewan).

That the universities partner with SHRF to explore innovative mechanisms for enhancing health research activities by building statistical, communications, administrative and health economics support for health research in the province.

Profile for Health Research

SHRF will develop and implement a health research communications strategy that will inform the public about the importance, achievements, and benefits of health research and will promote Saskatchewan as an attractive place to train and work in health research.

Funding

The provincial government will increase its investment in health research as resources allow.

Accountability

That the research community at large ensures its accountability to its funders and to the public related to the use and outcomes of its health research funding.

That SHRF, the universities, and health research organizations provide regular public reports on health research activities and outcomes in order to:

- *demonstrate the value of health research;*
- *increase the profile of health research activities;*
- *encourage health research partnerships;*
- *provide an opportunity for health policy-makers to connect with researchers who are studying relevant issues; and*
- *ensure that knowledge transfer is an integral component of all research activity.*

Chapter 5 *Implementing and Evaluating the Strategy*

This strategy is intended to serve as a blueprint for strengthening Saskatchewan's health research capacity over a 10-year horizon. It sets out an ambitious agenda based on a series of strategic directions and key actions. While some key actions can be acted upon immediately, there is recognition that others will be completed over a longer period.

The strategy is aimed at all participants in the health research community, with the Saskatchewan Health Research Foundation assuming a leadership role in implementing, promoting and monitoring the progress of the strategy.

The success of this strategy will depend upon the collective efforts of all of the key participants in Saskatchewan's health research community: individual researchers, the universities and research agencies, health care organizations, community groups, and the provincial government.

The Saskatchewan Health Research Foundation will assume lead responsibility for implementing several of the key actions, and will serve as a catalyst to stimulate collaborative action involving other research partners. But SHRF cannot implement the strategy on its own. The universities and other research organizations are asked to consider the strategy's broad directions in their own planning. Individual researchers are asked to consider how their research can deliver the greatest benefit to our people.

Health Research Summit

Most of the strategic directions and key actions contained in this strategy are aimed at a broad audience, with many of the actions calling for the development of partnerships and collaborative planning. While strong relationships already exist among the various research stakeholders, there is no existing mechanism for these groups to come together to exchange ideas and explore new opportunities for advancing health research in our province.

The Saskatchewan Health Research Foundation has recommended a health research summit involving researchers and key stakeholders that would explore the participants' respective roles and ideas for implementing the health research strategy. This recommendation is welcomed and accepted through the key actions of this strategy. The summit would also serve as an opportunity for raising public awareness about health research, the provincial strategy, and the benefits of a strong health research presence in Saskatchewan.

> *"We at SHRF stand ready to work on the resulting provincial plan with all health research stakeholders in the province, and to provide leadership for communicating, implementing, promoting and monitoring the progress of a provincial health research strategy."*
>
> *– SHRF: Shaping a Provincial Health Research Strategy for Saskatchewan – January 2004.*

Reporting Progress

In time we believe that we can implement all of the actions within this strategy and fulfill the strategic directions. We will need to measure our success or failure to ensure that we are progressing in the right direction. To this end, we will be asking the Saskatchewan Health Research Foundation to monitor and evaluate the strategy.

There are various indicators for measuring health research performance, ranging from success in competitive grant competitions, to the number of active researchers, to the successful application of health research. SHRF has expanded its efforts in research measurement and evaluation and will be asked to develop clearly articulated, broadly accepted performance measures for reporting on the strategy. The foundation will report back to the public and government periodically throughout the life of this strategy, ensuring that we are continuing to meet our strategic directions.

SHRF has been asked to ensure that its competitive grant funding programs, its research agency funding, and its other programs and activities are consistent with the strategic directions and actions contained in this strategy. SHRF will be asked to report to the public and the government on how the strategy has impacted its own directions, programs and workplan.

Strategic Direction:

Ensure that the actions identified in the Strategy are implemented and evaluated to ensure that they are fulfilling the strategic directions identified in the Strategy.

Actions:

SHRF will collaborate with the broader research community to plan and execute the implementation of the health research strategy (health research summit).

SHRF will report back to the Minister of Health regarding the initial impact of the Strategy on its directions, programs, and workplan.

SHRF will monitor and evaluate the implementation of the Provincial Health Research Strategy, using clearly articulated and broadly accepted performance measures, with a mid-strategy evaluation at approximately 5 years and final evaluation at 10 years.

SHRF will then report back to the provincial government and the public on the progress of the implementation of the Strategy.

Appendix A *Summary of Strategic Directions and Actions*

(Chapter 2) Research Priorities for Saskatchewan	
Strategic Direction **Address emerging health and health system challenges through a pragmatic and focused approach to health research in Saskatchewan. Health research resources should be focused on areas of need while capitalizing on areas of strength. This will include a research focus on the needs of specific population groups, key health determinants, and unique Saskatchewan needs and opportunities.**	
Key Actions	**Suggested Timeframe**
	(Short term = 0-3years, Medium term = 3-6 years, Long term = 6-10 years)
That the Saskatchewan health research community (including SHRF, the universities, and other research organizations) move, over time, to focus their health research activities in these key areas: Special population groups, including Aboriginal health and seniors; rural and remote health care delivery; health systems and policy research; the determinants of health status; public health, water safety and food safety; and synchrotron-based health research.	Medium – Long term
That SHRF align its funding for competitive programs and research agencies with the priorities outlined in this strategy. In addition to reflecting the priorities, SHRF will ensure that its funding program criteria encourage a strong partnership approach and reflect the appropriate balance of health research activities in the biomedical, clinical, health service delivery and population health areas, based on Saskatchewan's current needs.	Short – Medium term
That the Departments of Health and Learning, in consultation with SHRF, consider potential criteria to be applied to the Innovation and Science Fund, which will help to ensure that health research supported by the Fund is consistent with the health research priorities of the province.	Medium term

Key Actions	Suggested Timeframe
Health Needs of Special Population Groups	
That SHRF work in partnership with the Aboriginal community, the Indigenous Peoples' Health Research Centre, the three universities and other agencies as appropriate to help ensure that Aboriginal health research in Saskatchewan is done in a collaborative, inclusive and culturally sensitive manner. As part of this initiative, SHRF and its collaborating partners may want to consider discussions regarding: • defining specific health research priorities; • developing culturally appropriate strategies for undertaking research that addresses Aboriginal peoples' health needs; • exploring effective, culturally sensitive knowledge transfer mechanisms for First Nations and Metis populations (in conjunction with the provincial knowledge transfer framework development noted in Chapter 3); • developing approaches that minimize duplication of resources and efforts in the field of Aboriginal health research.	Short – Medium term
SHRF will consider the information and feedback from its discussions with the Aboriginal community, Indigenous Peoples' Health Research Centre and other collaborating partners as it develops its strategic directions and program funding priorities.	Short – Medium term
In order to meet the health needs of our aging and elderly population in both rural and urban settings, SHRF will collaborate with the Department of Health, the seniors' community, the universities and other agencies as appropriate, to identify health research priorities for this growing population.	Medium – Long term
Health Systems and Policy Research	
That key stakeholders including SHRF, the Department of Health, Health Quality Council, Academic Health Sciences Network, regional health authorities, and the universities, identify research needs related to workforce planning, training and forecasting; quality management and improvement; primary and mental health care services; timely access to care; and innovative, cost-effective health delivery models.	Medium term
That key stakeholders including SHRF, the Department of Health, Health Quality Council, regional health authorities and other appropriate agencies, collaborate to identify research needs related to rural and remote health service delivery.	Medium term
SHRF, through consultation with the universities and other health research organizations, will identify and facilitate appropriate mechanisms by which current research, relevant to health system management and health program policy, can be synthesized and disseminated.	Long term

Key Actions	Suggested Timeframe
Health Determinants and Public Health	
SHRF will encourage and facilitate health research related to the determinants of health status, including early childhood development and the prevention of chronic and lifestyle related disease (with an emphasis on diabetes, obesity and smoking).	Short term
SHRF will explore the research needs/priorities related to public health in Saskatchewan and identify new opportunities related to the new Public Health Agency of Canada.	Short – Medium term
That a collective and coordinated effort in the area of safe drinking water be organized to determine research priorities in the water safety field. This effort should build on existing processes and activities including work undertaken by the Working Group on the Provincial Long-Term Safe Drinking Water Strategy, the Institute of Agricultural, Rural and Environmental Health, and other agencies as appropriate.	Medium term
Unique Health Research Opportunities	
That the Saskatchewan health research community (including SHRF, the universities, and others as appropriate) explore synchrotron-based health research opportunities and priorities, as well as related health system applications and impacts related to the Synchrotron, to ensure that Saskatchewan makes the best of this unique opportunity in our province.	Medium – Long term

(Chapter 3) Knowledge Transfer – Applying What We Learn

Strategic Directions:

Build the capacity of government, regional health authorities, other health-related organizations and health professionals to incorporate available and new health research into improved treatment and prevention strategies, service delivery, and health policy development.

Encourage the health research community at large to build a knowledge transfer component into all health research projects.

Develop culturally sensitive mechanisms for knowledge transfer to/from Aboriginal communities.

Build collaborative mechanisms through which policy and research organizations and individuals have ongoing and effective dialogues to ensure that health research needs in the province are identified and met.

Identify and encourage commercial applications for health research where appropriate.

Key Actions	Suggested Timeframe
That all health research professionals and organizations (SHRF, universities, and other research organizations), health provider organizations, and other health research stakeholders commit to enhancing knowledge transfer in Saskatchewan by: • providing or accessing training and education regarding the benefits, necessities and methods of sharing and using health research knowledge; • making health research findings accessible and available to other researchers, health professionals, and the broader public community; • ensuring research projects involve the public and communities, as appropriate, in designing, carrying out, and interpreting health research; • identify and encourage commercial applications for health research where appropriate.	Short – Medium term
SHRF, in collaboration with the universities, Health Quality Council, and other key health research organizations will develop a provincial framework for building knowledge translation capacity in the province. The framework will include short and long term actions designed to ensure that we utilize research results in order to improve our health and our health system. As part of the framework, SHRF will consider: • the needs and responsibilities of health-related organizations related to knowledge transfer; • the needs and responsibilities of the provincial government and regional health authorities in knowledge transfer; • the roles of various research agencies (including SHRF and the universities) in knowledge transfer; • the structures by which stronger relationships can be developed among researchers, research funders, research users and the public to identify and address research needs and ensure the application of research discoveries; and • relevant mechanisms for knowledge transfer to specific communities.	Short – Medium term

(Chapter 4) Strengthening Health Research Capacity

Strategic Directions: Develop a stronger overall health research base in Saskatchewan by:

- **Increasing the number of active health researchers and research activities;**
- **Encouraging strategic partnerships in health research including partnerships among researchers, and partnerships between researchers and the public, private corporations and other provincial and national organizations;**
- **Ensuring the stability of provincial health research by increasing funding as resources allow;**
- **Enhancing Saskatchewan's ability to successfully compete for national health research funding;**
- **Increasing the pool of available health research funding by identifying and accessing other sources of potential funding provincially and nationally; and**
- **Ensuring that all health research funding is appropriately used, transparent, and achieves the stated goals of the research project.**

Key Actions	Suggested Timeframe
Human resources in health research	
That a partnership of key stakeholders including SHRF, the Department of Health, the Department of Learning, and the Universities, assess the issues related to ensuring an appropriate/adequate supply of health research graduate, doctorate and post-doctorate trainees. The assessment should include: • consideration of roles and responsibilities of the provincial government and the universities related to this issue; • analysis of existing vehicles and funding to help build the pool of graduate students; • consideration of other potential options for attracting and retaining graduate, doctorate, and post-doctorate trainees in Saskatchewan; • ensuring that activities in this area are aligned with the strategic priorities of the health research strategy.	Medium term
SHRF will continue to encourage researchers to partner with other researchers or research groups (as appropriate) to enhance their work.	Short term
SHRF will develop a proposal and seek out funding partners, including government, community-based organizations, crowns and other corporations, to establish a "Health Research Chairs" program in Saskatchewan that would help support researchers working in priority research areas (as identified by the strategy) if these needs are not being met by other mechanisms (e.g. Canada Research Chairs Program).	Medium – Long term
National and Partner Funding	
Regional health authorities will, as appropriate, identify and access opportunities to partner with universities, the Health Quality Council and other provincial and national organizations in order to conduct health system improvement and health status research. This examination should consider current barriers to regional health authority participation in health research and options for addressing them.	Ongoing
SHRF, contingent upon periodic evaluations, will continue to support the Saskatchewan/Canadian Institutes of Health Research – Regional Partnership Program as a mechanism to build provincial capacity to access federal research funding that is within the parameters of the provincial health research strategy (i.e. priorities).	Ongoing
SHRF will continue to identify partnerships, alliances, and other opportunities for increasing Saskatchewan's share of national health research funding available through the CIHR and other national and regional initiatives.	Ongoing

Key Actions	Suggested Timeframe
Infrastructure Needs	
The Department of Health, the Department of Learning, the universities, and other agencies as appropriate, will continue to explore opportunities to improve the supportive infrastructure (facilities, equipment and other resources) that contributes to health research activities (e.g. continue to support the development of the health sciences building at the University of Saskatchewan)	Ongoing
That the universities partner with SHRF to explore innovative mechanisms for enhancing health research activities by building statistical, communications, administrative and health economics support for health research in the province.	Medium – Long term
Profile for Health Research	
SHRF will develop and implement a health research communications strategy that will inform the public about the importance, achievements, and benefits of health research and will promote Saskatchewan as an attractive place to train and work in health research.	Medium term
Funding	
The provincial government will increase its investment in health research as resources allow.	Ongoing
Accountability	
That the research community at large ensures its accountability to its funders and to the public related to the use and outcomes of its health research funding.	Short term and ongoing
That SHRF, the universities, and health research organizations provide regular public reports on health research activities and outcomes in order to: • demonstrate the value of health research; • increase the profile of health research activities; • encourage health research partnerships; • provide an opportunity for health policy-makers to connect with researchers who are studying relevant issues; and • ensure that knowledge transfer is an integral component of all research activity.	Ongoing

(Chapter 5) Implementing and Evaluating the Strategy

Strategic Directions:

Ensure that the actions identified in the Strategy are implemented and evaluated to ensure that they are fulfilling the strategic directions identified in the Strategy.

Key Actions	Suggested Timeframe
That SHRF collaborate with the broader research community to plan and execute the implementation of the health research strategy (health research summit).	Short term
That SHRF report back to the Minister of Health regarding the initial impact of the Strategy on its directions, programs, and workplan.	Short term
That SHRF will monitor and evaluate the implementation of the Provincial Health Research Strategy, using clearly articulated and broadly accepted performance measures, with a mid-strategy evaluation at approximately 5 years and final evaluation at 10 years.	Medium and Long term
That SHRF will then report back to the provincial government and the public on the progress of the implementation of the Strategy.	Medium and Long term

Appendix B *Health Research Organizations in Saskatchewan*

The key players in health research in Saskatchewan include the universities (related faculties and research centres), regional health authorities, Health Quality Council, the Saskatchewan Health Research Foundation, and the Saskatchewan Cancer Agency. There are also community-based, disease-specific organizations that provide limited research funding.

University of Saskatchewan

The University of Saskatchewan generates the vast majority of health research in the province. This is reflective of the wide range of health science and health-related education programs. Health research makes up about 1/3 of all research activity at the University of Saskatchewan.

The University of Saskatchewan has recently developed its integrated plan for 2003-04 – 2006-07. In the plan, the university identifies several key areas of health research focus including infectious diseases, the relationship between the human and animal sides of health, and the development of the medical beamline at the Canadian Light Source synchrotron.

There are currently 15 research units in the College of Medicine (e.g. Applied Research/Psychiatry; Cameco Multiple Sclerosis Neuroscience Research Centre; Cardiovascular Risk Factor Reduction Unit; Geriatric Assessment Program; Institute of Agricultural Rural and Environmental Health (I.ARE.H); Institute for Health Outcomes Research; Neuropsychiatry Research Unit; Reproductive Biology Research Unit; Research Centre for Elimination of Tuberculosis; Cancer Control Research Program; Heart and Stroke Epidemiology Unit; SK Pediatric Auditory Rehabilitation Centre; Sociobehavioural Cancer Research Satellite Centre; Stroke Research Centre; Sleep Disorder Clinic. (source: Birdsell, J., Health Research in Saskatchewan: Charting a Path)

In addition there are other centres (e.g. Canadian Light Source; Saskatchewan Structural Sciences Centre; Vaccine and Infectious Diseases Organizations (VIDO); University institutes of relevance (e.g. Community University Institute for Social Research; Research Units (e.g. Saskatchewan Drug Research Unit); and associated research organizations (e.g. Saskatchewan Neuroscience Network; Saskatchewan Population Health and Evaluation Research Unit (SPHERU); Saskatchewan Institute on Prevention of Handicaps). Two of the health related research structures are joint University of Saskatchewan and University of Regina units (SPHERU and the Indigenous Peoples Health Research Centre). (Source: Birdsell, J., Health Research in Saskatchewan: Charting a Path)

University of Regina

The University of Regina health research strengths currently lay primarily in population health and health policy. They also have considerable strength in information technology.

The University has also identified "strategic emphases" in research and programming, including health. The primary interest in health research is in social and economic determinants. This focus builds upon current expertise located predominantly in the faculties of Kinesiology

and Health Studies, Arts, and Social Work, the Seniors Education Centre, and several research institutes, centres and laboratories.

The University of Regina research activities are organized under two structures: the Faculty of Graduate Studies and Research and a series of Centres and Institutes. The Centres and Institutes include: Canadian Institute for Peace, Justice and Security; Canadian Plains Research Centre; Centre for International Education and Training; Centre on Sustainable Communities; Centre on Aging and Health; Dr. Paul Schwann Applied Health and Research Centre; Humanities Research Institute; Indigenous Peoples Health Research Centre (IPHRC); Sample Survey and Data Bank Unit; Saskatchewan Instructional Development and Research Unit; Saskatchewan Institute of Public Policy; Saskatchewan Population Health and Evaluation Research Unit; and the Social Policy Research Unit. (Source: Birdsell, J., Health Research in Saskatchewan: Charting a Path)

First Nations University of Canada

The First Nations University of Canada is dedicated to promoting and expanding Aboriginal knowledge in teaching, research and service. The University is developing its interest and programs in health-related education and research for Aboriginal people. Health related programs at the university include health sciences, nursing, social work and dental therapy.

The Indigenous Peoples' Health Research Centre (IPHRC) is also a partnership with the First Nations University of Canada, the University of Saskatchewan and the University of Regina. The IPHRC is primarily focused on building capacity in health research among Aboriginal people, communities, and institutions. (source: IPHRC at www.iphrc.ca)

The Saskatchewan Cancer Agency

The Cancer Research Unit was established in May 1990. The Unit was awarded a Terry Fox Regional Development Grant from the National Cancer Institute of Canada (NCIC), which assisted in the initial funding of the scientists in the unit.

The Unit is home to five research scientists who are employees of the Saskatchewan Cancer Agency but who also hold cross appointments in the University. In addition, there are currently four Associate Members of the Unit who are full time employees of the University of Saskatchewan. All told the unit is a dynamic and active research center with a permanent staff of approximately 50. All research carried out within the unit is funded by competitive research grants from federal funding agencies, SHRF and health charities.

Regional Health Authorities

With the increasing emphasis on evidence-based decision making in health care, including evaluation, regional health authorities are beginning to develop more research capacity. The health authorities also play an important part in health research by supplying data and the use of equipment and facilities. Most of the current activities are focused in the Regina Qu'Appelle and Saskatoon Regional Health Authorities.

Health Quality Council

The aim of the Health Quality Council is "to improve the quality of health care and the caring experience – for both patients and providers – by encouraging use of best evidence about what works in our health care system." The Health Quality Council aims to improve the following dimensions in health system performance:

- Appropriate use of evidence-based health services;
- Timely access to these appropriate services;
- Smooth patient navigation through the health care system;
- Respect for patient preferences for care;
- Patient satisfaction with care; and
- Safety in the health care environment.

Saskatchewan Health Research Foundation

In addition to its work on this strategy, the Saskatchewan Health Research Foundation is responsible for managing and allocating most of the provincial health research funding in Saskatchewan. SHRF's mission statement is below:

"The Saskatchewan Health Research Foundation contributes to a healthy province by funding and promoting excellence in health research, promoting the benefits of health research, and enhancing capacity, including securing funds to support excellent research and researchers."

In addition to administering competitive grant funding programs, SHRF also provides direct operational funding to several health research centres including the Canadian Centre for the Analysis of Regionalization and Health; Indigenous Peoples' Health Research Centre; Institute for Agricultural, Rural and Environmental Health; Neuropsychiatry Research Unit; Saskatchewan Cancer Agency (research); and Saskatchewan Population Health and Evaluation Research Unit.

SHRF also supports the office of the University Coordinator of Health Research and the Saskatchewan/Canadian Institutes of Health Research Regional Partnership Program.

Saskatchewan Centennial 2005

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